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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,646	03/05/2002	Koji Ozawa	113197-025	9145
24573	7590	11/19/2004	EXAMINER	
BELL, BOYD & LLOYD, LLC PO BOX 1135 CHICAGO, IL 60690-1135			DONG, DALEI	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 11/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/091,646	<b>Applicant(s)</b> OZAWA ET AL.	
	<b>Examiner</b> Dalei Dong	<b>Art Unit</b> 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2004.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1 and 2 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 05 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,414,262 to Rao in view of U.S. Patent No. 6,428,218 to Mussig.

Regarding to claim 1, Rao discloses in Figure 2, column 3, line 11 to column 4, line 39, an optical fiber fusion splicer (1) comprising: a setting means (6) for setting respective end surfaces of two optical fibers that are to be spliced in order to abut against each other; a heating means (9) for heating an abutment portion of said optical fibers using a discharge beam; an image pickup means (2) for picking up an image of said discharge beam; and a control means (17) for measuring, from image signals obtained by said image pickup means when a preliminary arc discharge is generated between said discharge electrodes when a no optical fibers have been placed in a discharge area, brightness distributions on a plurality of lines that are set at different positions along a rectilinear direction between said discharge electrodes and run in a direction substantially at right angles to the rectilinear direction, estimating a heating center from the plurality of brightness distributions, subsequently controlling said setting means such that the abutment portion of said two optical fibers is positioned in the heating center; and

thereafter controlling said heating means such that a main arc discharge is generated and said abutment portion is heated by said discharge beam.

However, Rao does not disclose generating an arc discharge between two discharge electrodes. Mussig teaches in Figure 1, column 3, lines 10-24, generating an arc discharge (5) between two discharge electrodes (6).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilize the arc discharge between two discharge electrodes of Mussig for the heating element of splicer station of Rao in order to automate the control of the temperature for a splicing operation independently of ambient parameters.

Regarding to claim 2, Mussig teaches discloses in Figure 1, column 3, lines 39-60, control means (7) controls said heating means (6) such that the preliminary arc discharge in which said brightness distributions are estimated is performed with the current during the preliminary arc discharge smaller than the current during the main arc discharge in which said abutment portion is heated.

The reason for the combining is same as for claim 1 above.

### ***Response to Arguments***

3. Applicant's arguments filed October 13, 2004 have been fully considered but they are not persuasive.

In response to Applicant's argument that cited art is distinguishable from the claimed invention, for example, Rao reference provides that the position of the heating

center is determined based on the abutment portion of the optical fibers which were previously positioned on a heating position by irradiating a low power laser beam to the abutment portion. Examiner asserts that Applicant also uses the abutment portion of the optical fiber to position the heating center of the optical fiber and thus Examiner asserts that the prior art of record teaches the claimed invention and maintains the rejection.

Also, in response to Applicant's argument that Rao reference effectively teaches away from the estimation of the heating center with the arc discharge as claimed; Examiner asserts that the method of forming or finding the heating center is not germane to the issue of the structural apparatus or an optical fiber fusion splicer itself. Therefore, this limitation has not been given patentable weight. Further, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from prior art apparatus satisfying the claimed structural limitations (see MPEP section 2114).

Further, in response to Applicant's argument that Mussig reference perform an initial arc discharge in order to determine a discharge current in which the smallest loss during the splicing of the optical fibers can be achieved; Examiner asserts it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from prior art apparatus satisfying the claimed structural limitations (see MPEP section 2114).

Finally, in response to Applicant's argument that Mussig reference during the initial discharge is not always smaller than the current during the primary arc discharge; Examiner asserts that albeit the initial discharge is not "always" smaller than the current

during the primary arc discharge, however, there are initial discharge that is smaller than the current during the primary arc discharge and thus Examiner asserts that the prior art of record are valid and maintains the rejection.

### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalei Dong whose telephone number is (571)272-2370. The examiner can normally be reached on 8 A.M. to 5 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571)272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

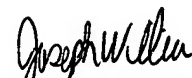
Art Unit: 2879

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



D.D.

November 8, 2004



Joseph Williams  
Primary Examiner  
Art Unit 2879